

*SIDOROVA, N.G.*

*Chem* 2  
Cyclization of aromatic compounds. X. Condensation of 1,4-cyclohexanediol and 4-chlorocyclohexanone with benzene. N. G. Sidorova and Yu. V. Vasilchikov. J. Gen. Chem. U.S.S.R., 20, 845-6 (1955) (Engl. translation).— See C.A. 50, 13326e. B.M.R.

SIDOROVA, N. G.

3/  
 Alkylation of benzene with polyhalide compounds in presence of aluminum. I. Porshakova, N. G. Sidorova and I. P. Tankervanik (Zh. obshch. Khim., 1958, 28, 1375-1378).—Condensation of benzene (I) with 1:2-dichloroethane (II) and  $\text{CHCl}_3$  in presence of metallic Al was investigated showing that, as with  $\text{AlCl}_3$ , products varied according to conditions: reactions between  $\text{CHCl}_3$  and I yielded anthracene besides di- (III) and tri-phenylmethane; quantity of anthracene increased with increasing III. With I and II, a 71% yield of 1:1-diphenylethane (IV) was achieved with the molar ratio II:I at 1:10.6:0.06, heating for 2 hr. at  $80^\circ$ ; with the ratio at 1:4:0.06, only resins were obtained. From these, bis-(p-(p-phenyl)thyl)benzene, m.p.  $91-91.5^\circ$ , was separated. The effect of operative factors on yield of IV was described.

A. L. B.

R.M.m

Sidorova, N. G.

1  
Acylation of benzene by polyhalogen derivatives in the  
presence of metallic aluminum. R. I. Porshakova, N. G.  
Sidorova, and L. P. Tarkovskii. J. Gen. Chem. U.S.S.R.  
30: 1049-52 (1958) (English translation).—See C.A. 50,  
p. 14078g. B. M. R.

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PM MT

Sidorova, N.G.

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Cycloalkylation of aromatic compounds. XI. Product of condensation of cycloheptanol with benzene. N. G. Sidorova and L. P. Tsukervanik (Central Asia State Univ., Tashkent). *Zh. Obshch. Khim.* 27, 1466-71 (1957); cf. *C.A.* 35, 3979<sup>1</sup>; 51, 2675g. Treatment of  $C_7H_{14}OH$  with  $MeN(NO)CO_2H$  gave 45-50% suberone, bp 172-5°,  $n_D^{20}$  1.4007 (semicarbazone, m. 162°), which hydrogenated in EtOH over Ni at 120° and 65 atm. H gave 90% suberol, bp 178-80°,  $n_D^{20}$  1.4747. This (8 g.) and 180 ml.  $C_7H_8$  was treated with 5 drops  $H_2O$  followed gradually by 6.7 g.  $AlCl_3$  over 2 hrs.; in 5 days during which  $HCl$  was periodically removed in vacuo with small addns. of  $H_2O$  (2-3 drops) there was obtained after heating 3-4 hrs. at 40-55° and briefly to 70-80°, and treating with dil.  $HCl$ , 73% cycloheptylbenzene, bp 148-50°,  $b_M$  135-5.5°,  $d_4^{20}$  0.9478,  $n_D^{20}$  1.5280; acetamido deriv., m. 172.5-3.5°; diacetamido deriv., m. 239-40°; benzamido deriv., m. 173.5-4.5°; sulfonamido, m. 142-3°. If the reaction is run as described by Pines, et al. (*C.A.* 40, 1148<sup>1</sup>), the yield is 35%, and the product bp 124-7°,  $d_4^{20}$  0.9400,  $n_D^{20}$  1.5224; under these conditions of violent reaction, the total product, bp 115-24°, evidently contains other substances than cycloheptylbenzene. XII. Synthesis and some transformations of 1-methyl-2-phenyl- and 1-methyl-3-phenylcyclohexanes. N. G. Sidorova. *Ibid.* 1472-5. Passage of 1-methyl-2-phenylcyclohexanol, bp 105-8°, over  $Al_2O_3$  at 320-30° gave 66% 1-methyl-2-

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Distr: 1/E4j/4E2c(j)/4E3d

Sidorova, N.G., and Tsukerman, I.P.  
 phenylcyclohexane,  $b_m$  135°,  $n_D^{20}$  1.5690, which was hydrogenated to 1-methyl-2-phenylcyclohexane (I),  $b_m$  133-43°,  $n_D^{20}$  1.5244,  $d_m$  0.9455, over Raney Ni at 120-6° and 55 atm. H<sub>2</sub>; the hydrocarbon I was nitrated and reduced with Sn-HCl, yielding the amino deriv.,  $b_m$  185°,  $n_D^{20}$  1.5622,  $d_m$  1.0144, which gave the *N*-benzoyl deriv., m. 190-7°, and an isomer, m. 201-2°. Hydrogenation of I over Raney Ni at 190° gave 96% 1-methyl-2-cyclohexylcyclohexane isomers,  $b_m$  141-2°,  $n_D^{20}$  1.4800,  $d_m$  0.8915. I heated with Se at even 300° failed to be completely dehydrogenated, but at 380° gave fluorene. Dehydrogenation of I over Pt-C at 350-70° gave Ph<sub>2</sub> and fluorene. A similar reaction sequence gave from 3-methylcyclohexanol 90% 2-methylcyclohexanone,  $b_m$  106-8°, which yielded 55% 3-methyl-1-phenylcyclohexane,  $b_m$  141-3°,  $n_D^{20}$  1.5586. This hydrogenated over Raney Ni at 80° and 60 atm. H<sub>2</sub> to 1-methyl-3-phenylcyclohexane (II),  $b_m$  133-4°,  $n_D^{20}$  1.5280,  $d_m$  0.9464 (benzamide deriv., m. 167-8°, and m. 174-5°), in addn. to a small amt. of apparently an *o*-isomer, m. 155-6°. Hydrogenation of the hydrocarbon at 190° gave 1-methyl-3-cyclohexylcyclohexane,  $b_m$  123-4°,  $n_D^{20}$  1.4859,  $d_m$  0.8930. Dehydrogenation of II over Pt-C at 310° gave *m*-MeC<sub>6</sub>H<sub>4</sub>Ph,  $b_m$  153-5°,  $n_D^{20}$  1.6012,  $d_m$  1.0115; nitration gave the 4,4'-dinitro deriv., m. 196°.

G. M. Kosolapoff

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Dm

2/2

Cycloalkylation of aromatic compounds. Part 12: Synthesis and  
certain conversions of 1-methyl-2-phenyl- and 1-ethyl-2-phenyl-  
cyclohexanes. Khim. otchist. 22 no. 6-1972-1973. 1973. 1-12. 1300.

Kharkovskiy gosudarstvennyy universitet.  
[Kharkov, Ukraine]

Sidorova, N. G.

Distr: 4E4J/4E2c(j)/4E3d

/Cycloalkylation of aromatic compounds. / XIII. Reaction of 1-phenyl-4-methylcyclohexanol with benzene in the presence of aluminum chloride. N. G. Sidorova and I. A. Tuchinskaya, (Central Asia State Univ., Tashkent). *Zhur. Obshchei Khim.* 27, 1764-6 (1957); cf. *C.A.* 51, 2675g. -- Hydrogenation of *p*-cresol over Raney Ni at 150°/100 atm. gave 4-methylcyclohexanol, *b<sub>m</sub>* 168-7°, which oxidized with  $\text{Na}_2\text{Cr}_2\text{O}_7\text{-H}_2\text{SO}_4$  to 84% 4-methylcyclohexanone, *b<sub>m</sub>* 167-0°, which with  $\text{PhMgBr}$  gave 64% 1-phenyl-4-methylcyclohexanol, *b<sub>m</sub>* 142-4°, *n<sub>D</sub>* 1.5345. This (19 g.) in 200 ml.  $\text{C}_6\text{H}_6$  was treated gradually with 12-20 g.  $\text{AlCl}_3$  over 1-15 hrs. and after standing overnight the mixt. refluxed several hrs. (2 hrs. was sufficient to complete the reaction) and treated with dil.  $\text{HCl}$ . The products included 48-6% methylphenylcyclohexanes, shown to contain 1-methyl-3-phenyl-

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SIDOROVA, N.G.; TELLY, V.M.

Condensation of 4-cyclohexylcyclohexanol with benzene in the presence of aluminum chloride. Dokl. AN Uz.SSR no.12:43-45 '58. (MIRA 12:1)

1. Sredneaziatskiy gosudarstvennyy universitet im. V.I.Lenina.  
Predstavleno chlenom-korrespondentom AN UzSSR I.P.TSukeshvanikom.  
(Cyclohexanol) (Benzene) (Condensation products (Chemistry))



AUTHORS: Sidorova, N. G., Poliker, I. A.

79-28-5-36/69

TITLE: ~~Cycloalkylation of Aromatic Compounds~~ (Tsikloalkilirovaniye aromaticeskikh soyedineniy) XIV. Condensations of Cyclohexanol With Some Aromatic Hydrocarbons (XIV. Kondensatsii tsiklogeksanola s rekotorymi aromaticeskimi uglevodorodami)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 5, pp. 1276 - 1279 (USSR)

ABSTRACT: In continuation of the earlier investigations by the authors on the alkylation of aromatic compounds with cyclic alcohols (Reference 1) they investigated the condensations of the xylols, of mesytilene, of naphthalene and fluorene with cyclohexanol in the presence of aluminum chloride. In order to avoid side processes they carried out the alkylation of the above-mentioned compounds with cyclohexanol with a small, just necessary, amount of aluminum chloride, as well as a great excess of hydrocarbon at low temperature. From o-xylol 4-cyclohexyl-1,2-dimethylbenzene (71,5%) was obtained. Somewhat worse was the course of the reaction with p-xylol; on the same conditions the yield was 68,6%. Especially easy to synthesize was the

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79-28-5-36/69

Cycloalkylation of Aromatic Compounds. XIV. Condensations of Cyclohexanol  
With Some Aromatic Hydrocarbons

m-xylol(86%), with 5-cyclohexyl-1,3-dimethylbenzene resulting in this case. Its structure was proved by the oxidation into trimesic acid (trimezinovaya kislota) (final product trimethylether !), which had already been discovered earlier by other scientists. However, lately a work was published (Reference 15) in which the structure of 4-cyclohexyl-1,3-dimethylbenzene is attributed to the condensation product of m-xylol with cyclohexene in the presence of aluminum chloride. The condensation of mesytilene with cyclohexanol yielded the 2-cyclohexyl-1,3, 5-trimethylbenzene (35,9%). In the alkylation of naphthalene 59% of monocyclohexylnaphthalene fraction were obtained which mainly consisted of the  $\beta$ -isomer, and 40% of the dicyclohexylnaphthalene fraction in which the presence of the 2,6-isomer could be proved. The condensations of fluorene with cyclohexanol did not take place easily (greatest yield in raw cyclohexylfluorene was 37%), with part of the fluorene remaining unchanged, which may be re-used. There are 1

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79-28-5-36/69

Cycloalkylation of Aromatic Compounds. XIV. Condensations of Cyclohexanol  
With Some Aromatic Hydrocarbons

table and 16 references, 4 of which are Soviet.

ASSOCIATION: Sredneaziatskiy gosudarstvennyy universitet (Central Asian  
State University)

SUBMITTED: April 22, 1957

Card 3/3

AUTHORS:

Sidorova, N. G., Tyshchuk, G. Kh.

007/7)-28-8-6/66

TITLE:

Cycloalkylation of Aromatic Compounds (Tsikloalkilirovaniya aromaticeskikh soyedineniy) XV. Condensation of Fluorene with Cyclonexanol in the Presence of Aluminum Chloride (XV. Kondensatsiya fluorena s tsiklogeksanolom v prisutstvii khloristogo alyuminiya)

PERIODICAL:

Zhurnal obshchey khimii, 1958, Vol. 28, Nr 8, pp. 2030-2032 (USSR)

ABSTRACT:

This paper is a continuation of earlier papers (Ref 1) which describe the condensation of fluorene with cyclohexanol in the presence of  $AlCl_3$ . The end product of this reaction was a cyclohexylfluorene<sup>3</sup> of unknown structure (m.p. 133°). The authors carried out several condensations with different amounts of  $AlCl_3$  and with equimolecular amounts of both components. With increased and with decreased amounts of aluminum chloride the yield of alkylation product was inferior (maximum: 32,9 % with 0,85 g.  $AlCl_3$ .aq.). Besides the alkylation reaction a dehydration of the cyclohexanol and a polymerization of the resulting cyclohexene occurred, which indicated

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Cycloalkylation of Aromatic Compounds.

XV. Condensation of Fluorene With Cyclohexanol in the Presence of Aluminum Chloride

SOV/79-28-8-6/66

clearly how the cyclohexanol was being used up. In order to ascertain the position of substitution to produce cyclohexylfluorene this compound was oxidized under pressure in dilute nitric acid at 140-150°, which produced 2-fluorocarbonic acid and which was then used to make the methyl ester. By dehydrating the cyclohexylfluorene in the presence of platinum black a new product, a 2-phenylfluorene, was produced. Both reactions clearly indicate that the condensation product is 2-cyclohexylfluorene (Formula I). To study this new hydrocarbon a mono-nitro derivative was prepared. Since all electrophilic substitution reactions in the fluorene molecule take place at the 2 and 7 positions, this compound probably has the structure (II). There are 1 table and 3 references, 1 of which is Soviet.

ASSOCIATION: Sredneaziaticheskoy gosud. stepennyy universitet  
(Central Asia State University)

SUBMITTED: July 4, 1957

Card 2/3

alkylation of Aromatic Compounds.

CV/71-4-8-6/66

1. Condensation of Fluorene With Cyclohexanol in the Presence of Aluminum Chloride

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85392

S/079/60/030/006/021/033/XX  
B001/B055

53300 (2209 also)

AUTHORS:

Sidorova, N. G. and Nikonovich, S. D.

TITLE:

Cyclalkylation of Aromatic Compounds. XVI. Reaction of  
1-Phenyl-2-methyl-cyclohexanol With Benzene

PERIODICAL:

Zhurnal obshchey khimii, 1960, Vol. 30, No. 6,  
pp. 1921 - 1926

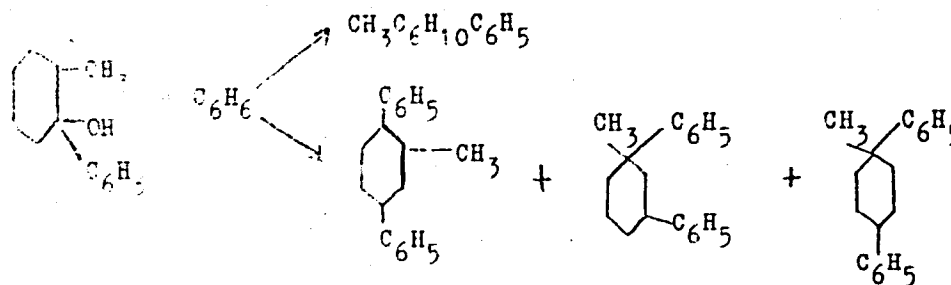
TEXT: This publication is a continuation of the authors' previous paper (Ref.1) on the above reaction in the presence of aluminum chloride. The reaction gives both alkylation and reduction products; the latter under isomerization. This time, the authors used 1-phenyl-2-methyl-cyclohexanol which was also brought to react with benzene in the presence of  $AlCl_3$ . Alkylation products (a mixture of methyl-diphenyl-cyclohexanes) and reduction products (a mixture of methyl-phenyl-cyclohexanes) were obtained in approximately equal yields. Unexpectedly, aluminum bromide gave chiefly methyl-phenyl-cyclohexanes and only slight amounts of methyl-diphenyl-cyclohexanes (Ref.2). Two crystalline

Card 1/3

85392

Cyclization of Aromatic Compounds.  
XVI. Reaction of 1-Phenyl-2-methyl-  
cyclohexanol With Benzene

S/079/60/030/006/021/033/XX  
B001/BC55



There are 6 references: 4 Soviet, 1 US, and 1 French.

ASSOCIATION: Sredneaziatskiy gosudarstvennyy universitet ((Soviet)  
Central Asia State University)

SUBMITTED: June 29, 1959

Card 3/4



SIDOROVA, N.G.; SAIDOVA, F.M.

Cycloalkylation of aromatic compounds. Part 17: Cyclohexylation  
of phenanthrene and anthracene. Zhur.ob.khim. 31 no.6:2014-2017  
Je '61. (MIRA 14:6)

1. Sredneaziatskiy gosudarstvennyy universitet.  
(Phenanthrene) (Anthracene) (Cycloalkylation)

SIDOROVA, N.G.; TELLY, V.Yu.

Cycloalkylation of aromatic compounds. Part 18: Reaction of  
benzene with 4-cyclohexanol. Zhur.ob.khim. 31 no.7:2149-2155  
Jl '61. (MIRA 14:7)  
(Cyclohexanol). (Benzene)

SIDOROVA, N.G.; FRANKMAN, N.I.

Cycloalkylation of aromatic compounds. Part 19: Reaction of  
benzene with 1-cyclohexylcyclohexanol. Zhur.ob.khim. 31 no.7:  
2155-2158 J1 '61. (MIRA 14:7)  
(Cyclohexanol) (Benzene)

L 12342-63

EPF(c)/EWP(j)/INT(m)/BDS Pr-4/ S/081/63/000/005/032/075  
Pc-4 RM/WM

64

AUTHOR: Sidorova, N. G. and Shamakhmudova, I. Sh.

TITLE: Alkylation of aromatic hydrocarbons with menthol

PERIODICAL: Referativnyy zhurnal, Khimiya, no. 5, 1963, 198, abstract 5Zh117,  
(Uzb. khimiya zh, UZb. Rhim. Zh., 1962, no. 2, 57-61)

TEXT: For comparison of the isomerizing properties of  $AlCl_3$  and  $H_2SO_4$  in alkylation reactions by isostructural compounds, the mono-alkylation of  $C_6H_6$ , m-xylol and p-xylol (I) were investigated with l-menthol (II) under mild conditions and under the influence of these catalysts. In all cases mixtures of substances, possessing optical activity were obtained. Thus, the angles of rotation of products, obtained with  $AlCl_3$  were always somewhat greater than those obtained with  $H_2SO_4$ . The presence of optical activity in secondary menthylarenes indicates that they are formed directly, and not through isomerization of tertmenthylarenes. In this manner, with both catalysts, the tertmenthylarenes are formed (and not through subsequent isomerization of the former under influence of  $AlCl_3$ ) inactive due to the symmetry of their molecules, as well as optically active secalkylates. There are no principal differences in the isomerizing action of  $AlCl_3$  and  $H_2SO_4$ . 0.035  
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S/081/63/000/005/032/075 0

L 12342-63

## Alkylation of aromatic ....

moles of  $\text{AlCl}_3$  were gradually added for 1.5 hours to a solution of 0.05 moles of II,  $[\alpha]_D^{20}$  -49.92°, in 100 ml of aromatic hydrocarbon, were agitated for 30 minutes at  $\sim 20^\circ\text{C}$ , after 10-15 hours were heated for 6 hours at  $65-70^\circ\text{C}$  and decomposed with dilute  $\text{HCl}$ . The organic layer was rinsed with water, thoroughly dried and excess hydrocarbon distilled. The residue was dissolved in n-heptane, rinsed with warm  $\text{H}_2\text{SO}_4$  ( $d = 1.76$ ) until cessation of coloration of the acid layer, then washed with water, dried, and then the mixture was boiled for 1 hour over Na and distilled in a vacuum. By another method to a solution of 0.5 moles of II in 100 ml of aromatic hydrocarbon, 20 ml concentrated  $\text{H}_2\text{SO}_4$  was added in the course of 1.5 hours at  $5^\circ\text{C}$  (in the case of I  $16^\circ\text{C}$ ) agitated for 5 hours, gradually raising the temperature to  $20^\circ\text{C}$ , the organic layer was washed with warm  $\text{H}_2\text{SO}_4$  ( $d = 1.76$ ) and further treated, as in the earlier process. Below are given initial hydrocarbon, catalyst, temperature of the reaction in  $^\circ\text{C}$ , time of reaction in hours, yield in %, b.p. in  $^\circ\text{C}/\text{mm}$   $n_D^{20}$ ,  $d_4^{20}$ , and  $[\alpha]_D^{20}$  of the products obtained in the

reactions:  $\text{C}_6\text{H}_6$ ,  $\text{AlCl}_3$ , 65-70, 6, 9.7, 144-148/13, 1.5131, 0.9270, -2.74;  
 $\text{C}_6\text{H}_6$ ,  $\text{H}_2\text{SO}_4$  5-20, 5, 13, 142-147/12, 1.5118, 0.9264, -2.50; m-xylol,  $\text{AlCl}_3$ ,

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L 12342-63

S/081/63/000/005/032/075

0

Alkylation of aromatic .....

65 - 70, 6, 31, 143 - 148/7, 1.5155, 0.9279. -6.49; m-xylol,  $H_2SO_4$ , 5 - 20, 5, 10, 168 - 174/16, 1.5089, 0.9181, -3.16; p-xylol,  $AlCl_3$ , 65 - 70, 6, 9, 141 - 147/6, 1.5080, 0.9133, -7.33; p-xylol,  $H_2SO_4$ , 16 - 20, 5, 8.2, 165 - 169/13, 1.4982, 0.9063, -6.89. S. Suminov.

[Abstractor's note: Complete translation]

Card 3/3

SIDOROVA, N.G.

Cycloalkylation of aromatic compounds. Part 20: Alkylation of benzene by methylcyclohexanols, cyclohexylcarbinol, and chloromethylcyclohexanes. Zhur.ob.khim. 32 no.8:2642-2649 Ag '62. (MIRA 15:9)

1. Tashkentskiy gosudarstvennyy universitet.  
(Benzene) (Cycloalkylation)

SIDOROVA, N.G.

Cycloalkylation of aromatic compounds. Part 21: Alkylation of benzene  
by 1- and 3-methylcyclopentanol. Zhur. ob khim. 32 no.8:2649-2652  
Ag '62. (MIRA 15:9)

1. TashkentSKIY gosudarstvennyy universitet.  
(Benzene) (Cyclopentano)



SIDOROVA, N.G.; KARTSEVA, I.I.

Cycloalkylation of aromatic compounds. Part 22: Alkylation of  
toluene and mesitylene by cyclohexanol. Zhur.ob.khim. 32  
no.9:2785-2789 S '62. (MIRA 15:9)

1. Tashkentskiy gosudarstvennyy universitet imeni V.I. Lenina.  
(Toluene) (Mesitylene) (Cyclohexanol)

SIDOROVA, N.G.; IVANOVA, A.I.

Cycloalkylation of aromatic compounds. Part 23: Reaction of  
benzene with 2-and 3-cyclohexylcyclohexanols. Zhur.ob.khim. 32  
no.9:2790-2791 S '62. (MIRA 15:9)

1. Tashkentskiy gosudarstvennyy universitet imeni V.I. Lenina.  
(Benzene) (Cyclohexanol)

SIDOROVA, N.G.; GREENSHCHIKOV, Yu.B.

Synthesis of 1-methyl-2-phenylcyclohexanol. Uzb. khim. zhur.  
7 no.4:79 '63. (MIRA 16:10)

1. Tashkentskiy gosudarstvennyy universitet imeni Lenina.

SIDOROVA, N.G.; SAIDOVA, F.M.

Cycloalkylation of aromatic compounds. Part 24: Cyclohexylation  
of acenaphthene. Zhur.ob.khim. 33 no.7:2213-2217 J1 '63.  
(MIRA 16:8)

1. Tashkentskiy gosudarstvennyy universitet imeni V.I.Lenina.  
(Acenaphthene) (Cyclohexanol)

SIDOROVA, N.G.; SAIDOVA, F.M.

Cycloalkylation of aromatic hydrocarbons. Part 25: Cyclopentylation of acenaphthene. Zhur.ob.khim. 34 no.1:38-40 Ja '64. (MIRA 17:3)

1. Tashkentskiy gosudarstvennyy universitet im. Lenina.

SAIDOVA, F.M.; SIDOROVA, N.G.

Cycloalkylation of aromatic compounds. Part 26: Cyclohexylation  
and cyclopentylation of fluorene. Zhur. ob. khim. 34 no. 5:  
1601-1604 My '64. (MIRA 17:7)

1. Tashkentskiy gosudarstvennyy universitet imeni Lenina.

SIDOROVA, N.G.; BOKOVA, A.I.

Alkylation of benzene by optically active alcohols. Zhur. org.  
khim. 1 no. 12:2176-2178 D '65 (MIRA 19:1)

1. Submitted March 29, 1965.

SIDOROVA, N. I.

Sidorova, N. I. and Pyatkin, M. D. - "Diphtherial bacteremia in children,"  
Trudy Vysch. med. i-ia in. S-shka, Vol. XII, 1948, p.113-14

SO: U-394 , 14 June 1953, (Letopis, 'Zhurnal 'nykh Stroy, No. 5, 1949).



SIDOROVA, N. I.; ZELENSKAYA, L. N.;

"The 'Sanatsiya' [Elimination of Bacilli] in Cases of Diphtheria Infection and of Diphtheria Bacillus Carriers by Using a Bacillus prodigiosus Suspension" Tezisy Dokladov 12-y Nauchnoy Seesi Stalingradskogo Meditsinskogo Instituta, Stalingrad, 1952, pp 32, 33.

Sidorova, N. K.

110 ✓ Movement of calcium and phosphorus in plants. N. V. Peterburgskii and N. K. Sidorova (K. A. Timiryazev Agr. Acad., Moscow). *Doklady Akad. Nauk S.S.S.R.* 164, 1049-52(1955). -- Deposition of  $\text{Ca}^{45}\text{Cl}_2$  on leaves of potato plants or apple trees failed to produce migration of Ca to other plant parts; similar lack of migration from one bunch of roots to another was observed in oats and peas as well as rye. On the other hand P (radioactive) showed ready migration in sunflower, clover, potato, and peas. Thus these plants can be satisfactorily supplied by P by spraying with phosphates, while the supply of Ca cannot be effective by such means. G. M. Kosolapoff

COUNTRY : USSR  
 CATEGORY : Cultivated Plants. M  
 ABS. JOUR. : RZhBiol., No. 3, 1959, No. 10930  
 AUTHOR : Peterburgskiy, A. V., Sidorova, N. K.  
 INST. : Timiryazev Agricultural Academy.  
 TITLE : Response of Corn to Lime Application.

HC. PUB. : Izv. Timiryazevsk. s.-kh. akad., 1957, No. 3, 131-142.

ABSTRACT : A brief survey of literature and results of experiments in vegetation vessels. The liming of soils taken from the farm of the Academy and from the subsidiary farm "Dubki" boosted the yield of the green roughage and grain of the corn. Combination of liming with the placement of humus in the planting holes at the rate of 1 ton/ha (on an average) increased the yield of the ears by 139% and that of the green roughage by 93% compared with the control (without humus and liming). The content of N and Ca in the grain was increased somewhat under the influence of the lime and humus. -- V. S. Shmal'ko

CARD: 1/1

DOMARADSKIY, I.V.; BASHEVA, V.S.; SIDOROVA, N.K.

Cultivation of the plague microbe in media of a certain composition. Izv.Irk.gos.nauch.-issl.protivochum.inst. 18:55-63 '58. (MIRA 13:7)

(PASTEURILLA PESTIS)  
(BACTERIOLOGY--CULTURES AND CULTURE MEDIA)

DZHAPARIDZE, M.N.; SIDOROVA, N.K.

Titration of antiplague serum with specific polysaccharide of *Vibrio comma*. Zhur.mikrobiol.epid. i immun. 27 no.9:78-81 S '56. (MIRA 9:10)

1. Iz Instituta mikrobiologii i epidemiologii Yugo-Vostoka SSSR.

(VIBRIO COMMA,  
specific polysaccharide, titration with anti-plague serum  
(Rus))

(IMMUNE SERUMS,  
anti-plague, titration with *Vibrio comma* specific  
polysaccharide (Rus))

(POLYSACCHARIDES,  
specific polysaccharide of *Vibrio comma*, titration with  
anti-plague serum (Rus))

PETERBURGSKIY, A.V., prof., doktor sel'skokhozyaystvennykh nauk; SIDOROVA  
N.K., mladshiy nauchnyy sotrudnik.

Reaction of corn to liming [with summary in English]. Izv. TSEKhA  
no.3:131-142 '57. (MIRA 11:3)  
(Lime) (Corn (Maize))

USSR/Cultivated Plants - Fodders.

M

Abs Jour : Ref Zhur Biol., No 18, 1958, 82380  
Author : Peterburgskiy, A.V., Sidorova, N.K.  
Inst : Timiryazev Agricultural Academy  
Title : On the Significance of Molybdenum for Clover on Acid Soils.  
Orig Pub : Dokl. Mosk. s.-kh. akad., in. K.A. Timiryazeva, 1957, vyp. 31, 47-48  
Abstract : Principal conclusions from the work of various Soviet and foreign agricultural chemists on the effect of Mo salts on the growth and yields of some grasses, especially leguminous ones, and a brief report on field trials carried out in 1955 and 1956 at the Timiryazev Agricultural Academy Field Cultivation Station. In 1955, spraying of the grass mixture of clover x timothy

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USSR/Cultivated Plants - Fodders.

M

Abs Jour : Ref Zhur Biol., No 18, 1958, 32380

with a solution of ammonium molybdate at the rate of from 0.5 to 2.1 kilograms of Mo to 1 hectare, was carried out in the budding phase (22 of June). The maximum increase (18.2%) was obtained with an Mo dosage of about 1 kilogram/ha. In the 1956 trials, no substantial differences in the effect of the Mo doses tested, on the yield were observed. Maximum N content in clover (69.7 kilograms/ha) and protein yield of 4.36 centners/ha was obtained with the Mo dosage of 0.27 kilograms/ha. Testing the same dosages on the grass mixtures of alfalfa and timothy showed the advantage of larger doses of Mo (0.5-1 kilogram/ha) which increased the hay crop. Top dressing with Mo produced a positive influence on the crop of timothy seeds. The effect of Mo, starting with the dosage of 0.54 kilograms/ha, was negative on clover in the first year of life on the permanent plot of the Institute of Potato Growing. -- Ye.M. Tsvetayeva

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PETERBURGSKIY, A.V., doktor sel'skokhozyaystvennykh nauk, prof.; SIDOROVA,  
N.K., mladshiy nauchnyy sotrudnik

Effect of molybdenum on clover and other crops in acid soils [with  
summary in English]. Izv. TSKhA no. 3:59-82 '58. (MIRA 11:7)

(Clover)

(Plants, Effect of molybdenum on)

DZHAPARIDZE, M.N.; SIDOROVA, N.K.

Effect of Pasteurella pestis on certain metabolic phases in animals susceptible to plague. Report No.2: Modification of the amount of citric acid in white mice infected with plague. Zhur.mikrobiol.epid. i immun. 30 no.2:90-94 F '59. (MIRA 12:3)

1. Iz Instituta mikrobiologii i epidemiologii Yugo-Vostoka SSSR (Mikrob).

(PLAGUE, experimental,  
citric acid metab. (Rus))

(CITRATES, metab.  
in exper. plague (Rus))

DZHAPARIDZE, M.N.; SIDOROVA, N.K.

Study of peculiarities of metabolism in plague by means of  
fluoroacetate. Vop.med.khim. 6 no.1:57-61 Ja-P '60.

(MIRA 13:5)

1. The "Microbe" State Research Institute for Microbiology and  
Epidemiology in the South-East of the U.S.S.R.

(FLUOROACETATES)

(PLAGUE metab.)

KOZAKEVICH, V.P.; MINKOV, G.B.; SIDOROVA, N.K.

Use of cortisone for the detection of plague infection in lesser  
susliks. Zhur.mikrobiol.epid.i immun. 31 no.2:35-38 P '60.  
(MIRA 13:6)

1. Iz Gosudarstvennogo instituta mikrobiologii i epidemiologii  
Yugo-Vostoka SSSR, Saratov i Astrakhanskoy protivochumnyy stantsii.  
(CORTISONE pharmacol.)  
(PLAGUE veterinary)  
(RODENTS diseases)

DZHAPARIDZE, M.N.; SIDOROVA, N.K.; RYKSHINA, N.A.

Characteristics of amino acid metabolism in animals infected with  
plague. Vop. med. khim. 7 no. 1:32-38 Ja-F '61. (MIRA 14:4)

1. State Research Institute for Microbiology and Epidemiology of  
The South-East of the U.S.S.R.  
(AMINO ACIDS) (PLAGUE)

KRZHIZHANOVSKIY, R.Ye.; SIDOROVA, N.P.

Determining the heat conductivity of liquid-metal coolants by the  
longitudinal heat flux method. Inzh.-fiz. zhur. 7 no.8:75-80 Ag '64.  
(MIRA 17:10)

1. TSentral'nyy kotloturbinnyy institut im. I.I. Polzunova, Leningrad.

SIDOROVA, N.P.

New Sarmatian Mactridae of the Mangyshlak Peninsula and Ust-Urt.  
Mat.k "Osn.paleont." no.3:61-70 '59. (MIRA 15:7)  
(Mangyshlak Peninsula--Mactridae, Fossil)  
(Ust-Urt--Mactridae, Fossil)

17(4)

AUTHOR: Sidorova, N. P.

SOV/20-124-3-51/67

TITLE: ~~Phylogenetic Correlations~~ Between the Sarmatian Mactridae of the Mangyshlak and the Ust'urt (O filogeneticheskikh vzaimootnosheniyakh sarmatskikh maktrid Mangyshlaka i Ustyurta)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 3, pp 671-673 (USSR)

ABSTRACT: The problem mentioned in the title was first undertaken in the 1920's because at that time sufficient material was available. A survey of publications is given (Refs 1-6). Korobkov (Ref 6) distinguished the Sarmatian Mactridae as the subgenus Sarmatimactra on the basis of it's hinge: the lamellae of the second tooth are closely spaced and grown together. It was further established that reduction of the lamella of the tooth 4 b can be characteristic for them; it can, however, be entirely lacking. Sarmatimactra is divided into four groups of interrelated species according to the peculiarities of the hinge: a. the group of M. eichwaldi; b. of M. vitaliana; c. of M. crassicolis and d. of M. caspia (groups c. and d. chosen by Yegorova in 1955). The original form of the

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Phylogenetic Correlations Between the  
Sarmatian Mactridae of the Mangyshlak and the Ustiurt

SOV/20-124-3-51/67

Sarmatian *Mactra* is *Mactra eichwaldi*. Among modern researchers, A. Papp alone combined *M. eichwaldi* with *M. vitaliana* and *M. fabreana* into a single species (Ref 10). This is totally unfounded. V. P. Kolesnikov (Refs 4, 5) traces *M. vitaliana* from *M. fabreana*. This contradicts the stratigraphic development of both species. *Mactra* with a rounded keel occur in the lower half of the Middle Sarmatian, those with a sharp, crest-like keel in the upper half. Such a relationship has been determined by V. Ye. Yegorova in Mangyshlak (Ref 1) and A. G. Eberzin in Moldaviya (oral communication). Based on the analysis of the known forms the author proposes a scheme (Fig 1) which differs from the scheme of Kolesnikov. In this it is asserted (in contrast to Kolesnikov, Refs 4, 5) that *M. podolica* is derived not from *M. fabreana* but from *M. eichwaldi*; *M. naviculata* has apparently separated from *M. podolica* instead of *M. praecaspia*. The phylogenetic line of development *M. praepallasii* sp. n. - *M. pallasii* - *M. fabreana* (Ref 1) is confirmed; nevertheless *M. praepallasii* is considered a subspecies of *M. vitaliana*;

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Phylogenetic Correlations Between the  
Sarmatian Mactridae of the Mangyshlak and the Ust'urt

SOV/20-124-3-51/67

from within *M. pallasii* are two subspecies selected:  
*M. pallasii pallasii* and *M. pallasii simionescui* Macar.  
The latter subspecies was improperly assigned by Macaroviçi  
(Ref 8) to the species *M. vitaliana* Orb. *M. vitaliana* stems  
from *M. eichwaldi* and that through the subspecies  
*M. eichwaldi crassa* subsp. nova.  
There are 1 figure and 12 references, 7 of which are Soviet.

PRESENTED: September 5, 1958, by N. S. Shatskiy, Academician

SUBMITTED: September 3, 1958

Card 3/3

SIDOROVA, N.P.

Systematics of Sarmatian nautilus. Paleont. zhurn. no. 2:  
85-96 '60. (MIRA 13:7)

1. Paleontologicheskii institut Akademii nauk SSSR.  
(Lamellibranchiata, Fossil)

SIDOROVA, N.P.

Evolution of the hinge in Sarmatian nautilus. Paleont. zhurn. no. 3:  
7-14 '60. (MIRA 13:10)

1. Paleontologicheskii institut Akademii nauk SSSR.  
(Lamellibranchiata, Fossil)

SIDOROVA, N.P.

Some new Sarmatian cardinals of the Mangyshlak. Paleont. zhur.  
no.2:43-49 '61. (MIRA 14:6)

1. Paleontologicheskii institut AN SSSR.  
(Mangyshlak Peninsula--Lamellibranchiata, Fossil)

L 3552-66 EWT(m)/EPF(c)/EWP(j)/T RM

ACCESSION NR: AP5024398

UR/0286/65/000/015/0080/0080

AUTHORS: Danilov, S. N.; Ustyuzhanin, G. Ye.; Sidorova, N. S.; Kogan, E. M.;  
Isakova, V. F.

TITLE: A method for obtaining epoxy resins. Class 39, No. 173405

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 15, 1965, 80

TOPIC TAGS: epoxy, resin, alcohol, phenol

ABSTRACT: This Author Certificate presents a method for obtaining epoxy resins by condensing epichlorhydrin of a polyatomic alcohol with biatomic phenols applicable to the production of epoxy resins (for instance, resorcin or dian). The reaction is carried out in the presence of a base at a rising temperature, and solidification proceeds in the usual manner. To broaden the base of raw material by replacing the edible products with inedible ones, epichlorhydrin of xilitane-1,4-2,3-dianhydro-5-chlor-5-desoxyxylite is used as epichlorhydrin of a polyatomic alcohol.

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy, AN SSSR (Institute of High Molecular Compounds, AN SSSR)

Card 1/2

L 3552-66  
ACCESSION NR: AP5021398

SUBMITTED: 10Nov63

NO REF SOV: 000

ENCL: 00

OTHER: 000

SUB CODE: 00, *SC*

Card *2/2*

SIDOROVA, N.S., inzh.

Methods and forms for receiving and using information materials.  
Opyt rab. po tekhn. inform. i prop. no.4:19-20 '63. (MIRA 17:1)

1. Byuro tekhnicheskoy informatsii Saratovskogo zavoda sinteticheskogo spirta.



USOV, Yu.N.; SIDOROVA, N.V.

Conversions of hydrocarbons in the presence of oxide catalysts.  
Part 7. Aromatization of binary alkane-arene mixtures over a  
chromium catalyst. Zhur.ob.khim. 25 no.9:1702-1704 S '55.  
(MIRA 9:2)

1. Saratovskiy gosudarstvennyy universitet.  
(Paraffin) (Aromatization)

Sidorova, N.V.

Equivalent degrees of conversion of benzene and its homologs in the hydrogenation reaction. V. B. Katsenbach, N. S. Kuzkova, and N. V. Sidorova. Izv. Akad. Nauk S.S.S.R. 8, 155-61 (1950).—The values of hydrogenation equil. consts. of C<sub>6</sub>H<sub>6</sub> were calcd. 46.46

W. M. SERNICOFF

✓ Transformations of hydrocarbons in the presence of oxide  
catalysts. VII. Aromatization of binary alkanearene mix-  
tures over chromium catalyst. Yu. N. Uskov and N. V. Sidorova.  
J. Gen. Chem. U.S.S.R. 25, 1656-1660 (1951).  
(BRIEF COMMUNICATION).—See C.A. 50, 5545h. B. M. R.

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KATSOBASHVILI, Ya.R.; SIDOROVA, N.V.

Coke formation in catalytic destructive hydrogenation of petroleum  
and petroleum remains. Zhur. prikl. khim. 31 no.8:1252-1258 Ag '58.  
(MIRA 11:10)

1. Institut nefti AN SSSR.  
(Hydrogenation) (Petroleum products)

BEREZKIN, V.G.; SIDOROVA, N.V.

Calculation of the relative retention time of compounds in combined chromatographic columns. Neftekhimiia 3 no.1:144-148 Ja-F '63.  
(MIRA 16:2)

1. Institut neftekhimicheskogo sinteza AN SSSR.  
(Chromatographic analysis)

SIDOROVA, R.G., inzh.; TARAKANOV, G.I., kand.sel'skokhoz.nauk, red.;  
SIDOROV, V.Ya., red.; KHOMYAKOV, A.D., tekhn.red.

[Plastics in agriculture; translated articles] Plastmassy  
v sel'skom khozsisistve; sbornik perevodov. Red.G.I.Tarakanov.  
Sost.R.G.Sidorova. Moskva, Izd-vo inostr.lit-ry, 1959. 250 p.  
(Plastics)

SPENCER, T. .

Sidorova, S. G. "The effect of hydrogen peroxide on the blood platelets of  
crickets exposed to potassium cyanide," Trudy Stevrop, s.-kh. in-ia, Issue  
3, 1948, p. 17-27

So: U-3566, 14 March 53, (Latovis 'Zhurnal 'nykh Statey, No. 13, 1949)

CHEN, S. S.

Sidorova, S. G. "The effect of hydrogen peroxide on the blood catalase of animals poisoned with jet sodium cyanide," Trudy Sta. rop. n.-kn, in-ta, issue 3, 1948, p. 65-74  
Bull. cit. 22 times

Co: U-356, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 13, 1949)



STUDY, S. G.

Sidorova, S. G. "The effect of hydrogen peroxide on the oxidation-reduction potential of the blood of mice poisoned with potassium cyanide," Trudy Statrop. s.-kh. in-ta, Issue 3, 1949, p. 303-11 -- Bibliogr: 29 items

So: U-3566, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 13, 1949)

USSR/Medicine, Veterinary

FD-1274

USSR/Medicine - Veterinary

Card 1/1 : Pub. 137-11/17

Author : Sidorova, S. G., Professor and Bobyleva, Z. I., Assistant

Title : Concerning pathogenic therapy in cases of gastro-intestinal colic in horses.

Periodical : Veterinariya, 10, 52-55, Oct 1954

Abstract : Intravenous injection of 10% solution of sodium bromide in combination with caffeine produced positive effects in majority of 20 horses treated for gastro-intestinal colic. The therapeutic effect of bromide-caffeine mixture depends on the type of nervous activity in each individual case and on the condition of the nervous system at the time the bromide-caffeine treatment was inaugurated. Since there are many causes of gastro-intestinal colic and since there are different courses that the disease may take, treatment must not be limited to intravenous injection of bromide-caffeine mixture: physical therapy, laxatives, and diets may produce the desired results.

Institution : Stavropol Agricultural Institute

Submitted :

SIDOROVA, S.G. , prof.; DOBRYNINA, V.I., dots.

Stimulating effect of phenothiazine on sheep development.  
Veterinariia 35 no.5:118-121 My '58. (MIRA 12:1)

1. Stavropol'skiy sel'skokhozyaystvennyy institut.  
(Phenothiazine) (Sheep)

GOVOROV, Nikolay Pavlovich, prof.; SIDOROVA, Sof'ya Grigor'yevna,  
prof.; DREVLYANSKAYA, N.I., red.; KHODOROVSKIY, V.N., red.;  
GUREVICH, M.M., tekhn. red.; BELOVA, N.N., tekhn. red.

[Veterinary pharmacology] Veterinarnaia farmakologiya. Mo-  
skva, Sel'khozizdat, 1962. 359 p. (MIRA 16:5)

1. Omskiy veterianrnyy institut (for Govorov). 2. Stavropol'skiy  
sel'skokhozyaystvennyy institut (for Sidorova).  
(Veterinary materia medica and pharmacy)

SIDOROVA, S.G., prof.; GOVOROV, N.P., prof.

"Pharmacology" by I.E. Mozgov [prof., deystvitel'nyy chlen  
Vsesoyuznoy akademii sel'skol'khozyaystvennykh nauk imeni Lenina].  
Reviewed by S.G. Sidorova and N.P. Govorov. Farm. i toks. 25  
no.2:238-242 Mr-Apr '62. (MIRA 15:6)

(PHARMACOLOGY)  
(MOZGOV, I.E.)

SIDOROVA, S.G., prof.

[Use of phenothiazine-salt and sulfursalt briquets in cattle feeding] Primenenie fenotiazino-solevykh i serno-solevykh briketov pri kormlenii skota. Stavropol', Stavropol'skoe knizhnoe izd-vo, 1964. 15 p. (MIRA 18:8)

1. Stavropol'skiy sel'skokhozyaystvennyy institut.

SILVERMAN, JACOB

ca

**Effects of potassium permanganate on isolated frog and rabbit hearts.** S. G. Sidoryn and O. D. Tsvetkov. *Farmacol. i Toksikol.* 7, No. 6, 27-30 (1944).—At concns. of 20-100 p. p. m. in frogs and about 14-20 p. p. m. in rabbits  $KMnO_4$  inhibits cardiac activity by acting on the nerve system, not on heart muscle. Julian P. Smith

AS 0.32.0 METALLURGICAL LITERATURE CLASSIFICATION

**CIA-RDP86-00513R001550520001-2"**

S/138/60/000/012/008/009  
A051/A027

AUTHORS: Tsvetayeva, Ye. M., Sidorova, R.I., Drugovskaya, M.N.,  
Shokhin, I.A.

TITLE: Synthetic Softeners for the Reclaiming of Rubber Produced From  
the Products of Its Pyrolysis

PERIODICAL: Kauchuk i rezina, 1960, No.12, pp. 31-34

TEXT: The authors have developed a method for the production of a polymer from rubber oil, which can serve as an active softener in rubber reclaiming. The method also helps to deodorize the rubber oil. Mention is made of the method presently used in the USSR for the production of rubber oil, containing 90% of compounds, which react with strong  $H_2SO_4$  (Ref.2) (Fig. 1). The medium and heavy fractions of the oil contain more of these compounds than the light ones. Since the oil contains 80% of medium and heavy fractions with the greater unsaturation, this product can be processed without preliminary fractionating. The method developed by the authors is described as follows: 98%  $H_2SO_4$  (12 w.p) is poured into an apparatus

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A051/A027

Synthetic Softeners for the Reclaiming of Rubber Produced From the Products  
of Its Pyrolysis ✓

equipped with a mixer and a jacket, in which the rubber oil (100 w.p.) is vigorously mixed for 20-30 min, at a temperature of 10-25°C in small portions. Then the mixing continues for 2-3 hours more at the same temperature. After holding 4-5 hours the acidic petroleum asphalt is let out of the apparatus and the remaining oil is processed a second time with H<sub>2</sub>SO<sub>4</sub> (10 w.p. based on the initial oil). The second asphalt let out after holding of 16-20 hours is mixed with the first one. The purified oil is washed with hot water 3-4 times and is neutralized with a 0.5% solution of NaOH at 60-70°C. Then a second washing with water is done. Due to this processing an oil is produced with an odor of kerosene. The water is separated from the oil by heating for 2-3 hours at 80-95°C. The formed acidic asphalt is washed 4-5 times with hot water and is then neutralized with a 10% solution of NaOH at 60-70°C, whereby the alkali solution is introduced in 4-5 portions. Each portion is about one quarter of the asphalt volume. The reaction of the last rinsing water should be neutral or weakly acidic. The obtained organic

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S/138/60/000/012/008/009  
A051/A027

## Synthetic Softeners for the Reclaiming of Rubber Produced From the Products of Its Pyrolysis

mass (subsequently called polymer) contains up to 40% of emulsion water, the main quantity of which can be separated after heating for 3-4 hours at 90-95°C. In order to produce a well-deodorized polymer, it is suggested distilling the volatile components at 130-140°C. The described method can be recommended for industrial use. The polymer yield was 46% and the deodorized oil 43% of the initial oil. The deodorized oil as compared to the non-processed one has a lower iodine number and contains less sulfur. The increase in the molecular weight, viscosity, specific gravity and relative content of heavy fractions when processed with sulfuric acid points to the fact that the deodorized oil contains also polymers in addition to unchanged components of the non-processed oil. The latter differ from polymers passed into the asphalt by lesser polarity and unsaturation. A conclusion is drawn that when processing rubber oil with sulfuric acid together with other processes dehydro- and hydropolymerization take place (Ref.3). It was also seen that the deodorized oil contrary to the initial oil contains sulfur in the form of odorless compounds. When heated under atmospheric

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S/138/60/000/012/008/009  
A051/A027

Synthetic Softeners for the Reclaiming of Rubber Produced From the Products of Its Pyrolysis

pressure, these sulfur compounds begin to decompose at a temperature of 150°C forming substances with an unpleasant odor. When heating the oil mixture with rubber and rubber chunks even at 190°C no odor is noted. The polymer obtained from the asphalt is found to contain more hetero-atoms (especially sulfur and oxygen) than the non-processed and deodorized oil. In the deodorizing process the quantity of oxygen in the oil even increases somewhat. It is concluded that the increase in the quantity of the hetero-atoms in the polymer can take place as a result of the extraction of compounds with hetero-atoms from the oil with sulfuric acid and the formation of new polar compounds by sulfurization of certain components of the oil. Due to a lower iodine number the deodorized oil differs from the non-processed oil by a lowered masticating action. Both oils do not have sufficient intensifying action due to a low content of polar compounds in them (Ref.4). It is pointed out, therefore, that these oils can be used in rubber reclaiming only in combination with more polar softeners. The polymer is said to

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A051/A027

# Synthetic Softeners for the Reclaiming of Rubber Produced From the Products of Its Pyrolysis

be a very active reclaiming agent, easily used without any addition of other softeners. The reclaimed rubber thus obtained has good physico-mechanical indices and an elevated chloroform extract. It also has a lowered acetone extract. The polymer samples and the deodorized oil were tested at the Chekhovskiy regeneratnyy zavod (Chekhov Reclaiming Plant) under semiindustrial conditions in reclaiming tire rubber by the water-neutral method. The results corresponded well with laboratory findings. It is pointed out that the deodorized rubber oil is not recommended as a universal softener, as it is applicable only to the reclamation of rubber not requiring very large amounts of softener. An estimation of the cost showed that the polymer would be twice as low in cost (1,000 rubles/ton) as the applied combined softener in most plants based on Arkhangel'sk pine resin and fuel oil. There are 5 tables and 4 Soviet references.

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promyshlennosti i Chekhovskiy regeneratorny zavod ( Scientific Research Institute of the Tire Industry and Chekhov Reclaiming Plant).

Card 5/6

ACC NR: AT6034037

SOURCE CODE: UR/0000/66/000/000/0147/0149

AUTHOR: Voyevoda, L. V.; Oksyuk, A. A.; Sidorova, R. P.; Ishchenko, I. K.; Khudenskiy, Yu. K.; Tishchenko, V. G.

ORG: none

TITLE: Correlation of the structure of the first coordination sphere with emission spectra of europium benzoylacetonate

SOURCE: Simpozium po spektroskopii kristallov, soderzhashchikh redkozemel'nyye elementy i elementy gruppy zheleza. Moscow, 1965. Spektroskopiya kristallov (Spectroscopy of crystals); materialy simpoziuma. Moscow, Izd-vo Nauka, 1966, 147-149

TOPIC TAGS: ~~europium complex~~, ~~organoeuropium compound~~, luminescence spectra, IR spectrum, chelation, crystal symmetry, absorption spectrum, emission spectrum, benzene, europium compound, acetone, complex molecule

ABSTRACT: Infrared absorption spectra of the microcrystalline  $\text{EuB}_3\text{P}$ ,  $\text{EuB}_4\text{HP}$ , and  $\text{EuB}_3\text{H}(\text{NH}_3)$  complexes, where B is benzoylacetonate and P is piperidine, were measured at 77K to clear up the controversy about the degree of distortion of the first coordination sphere of the  $\text{Eu}^{3+}$  ion. This study was prompted by the reported difference in the luminescence spectra of  $\text{Eu}^{3+}$  in benzoylacetonate complexes with different bases and by the earlier failure to correlate the emission spectra with the symmetry of the ligand field. A difference in the luminescence spectra of the

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ACC NR: AT6034037

above Eu chelates was noted, even though they contained the same base, and was attributed to different structural modifications of the europium benzoylacetonate. The shape of the infrared spectra of the complexes studied confirmed the assumption of a continuous decrease in distortion of the coordination oxygen octahedron in the process of formation of the tetraligand  $\text{EuB}_4\text{HP}$ . The  $\text{EuB}_3\text{P}$  complex is formed first in the process of synthesis and displays infrared spectrum identical with that of  $\text{EuB}_3\text{H}(\text{NH}_3)$ . Depression of the spectral line corresponding to  $^5\text{D}_0-^7\text{F}_0$  transition in  $\text{EuB}_4\text{HP}$  as compared to  $\text{EuB}_3\text{P}$  indicated a decrease in distortion of the coordination octahedron and was accompanied by an increase in relative luminescence yield. The spectral characteristics of  $\text{EuB}_4\text{HP}$  and  $\text{EuB}_4\text{HM}$ , where M is morpholine, are, therefore, correlated with the increase in symmetry of the first coordination sphere in comparison with  $\text{EuB}_3\text{P}$  or  $\text{EuB}_3\text{H}(\text{NH}_3)$ . Orig. art. has: 2 figures and 1 table.

SUB CODE: 07/ SUBM DATE: 25Mar66/

Card 2/2

ACC NR: AT6034038

SOURCE CODE: UR/0000/66/000/000/0150/0152

AUTHOR: Oksyuk, A. A.; Voyevoda, L. V.; Sidorova, R. P.; Ishchenko, I. K.;  
Tishchenko, V. G.; Khudenskiy, Yu. K.

ORG: none

TITLE: Coordination symmetry of the emitting ion in various rare-earth element  
chelates

SOURCE: Simpozium po spektroskopii kristallov, soderzhashchikh redkozemel'nyye  
elementy i elementy gruppy zheleza. Moscow, 1965. Spektroskopiya kristallov  
(Spectroscopy of crystals); materialy simpoziuma. Moscow, Izd-vo Nauka, 1966, 150-152

TOPIC TAGS: rare earth complex, organoeuropium compound, organogadolinium compound,  
organoterbium compound, organodysprosium compound, organoholmium compound, chelate,  
luminescence spectrum, IR spectrum, crystal symmetry, absorption spectrum,  
benzene, acetone, complex molecule, rare earth element

ABSTRACT: A study of the infrared absorption spectra of the rare-earth element  
benzoylacetates [same source, p. 147-149] was extended to the microcrystalline  
protonized modifications  $MeB_4$ , where Me = Eu, Gd, Tb, Dy, or Ho and B = benzoylace-  
tone. The purpose of the study was to evaluate the effect of splitting of the f  
energy levels in the ligand field on the frequency shift of the infrared absorption  
bands of carbonyl groups (1500—1610  $cm^{-1}$  region). The frequency shift in this  
region, as in the 500—900  $cm^{-1}$  region, reflects a decrease in distortion of the

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ACC NR: AT6034038

first coordination sphere. The microcrystalline  $\text{MeB}_4$  complexes were expected to display higher symmetry of the first coordination sphere by analogy with the  $\text{MeB}_4\text{HP}$  complexes. The graph of the frequency of carbonyl band ( $\sim 1575 \text{ cm}^{-1}$ ) of  $\text{MeB}_4$  complexes versus the atomic number of Me exhibited the "gadolinium angle" analogous to the one observed earlier on the graph of stability constants of the same complexes. The "gadolinium angle" may be correlated with a uniform distribution of f-electrons between orbitals of the Gd atom. Orig. art. has: 3 figures and 1 table.

SUB CODE: 07/ SUEM DATE: 25May66/

Card 2/2



SIDOROVA, R. P. (Co-author)

See: NEPENIN, Yu. N.

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Effect of the structure on the optical characteristics of derivatives  
of some five-membered heterocycles. Izv. AN SSSR.Ser.fiz. 26 no.10:  
1304-1305 0 '62. (MIRA 15:10)

(Heterocyclic compounds—Optical properties)  
(Chemical structure)

SIDOROVA, R.P.

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PASAL'SKAYA, M., vagonetchitsa; KALININA, M., sadchitsa;  
MOSHAROVA, S., sadchitsa; SIDOROVA, S., inzh.; po ratsionalizatsii;  
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Jl '59. (MIRA 13:1)  
(Moscow--Brick industry)

Card 1/1

BADULIN, A.V., kand.biolog.nauk; MATIS, E.G., starshiy nauchnyy sotrudnik; SUSIDKO, P., kand.biolog.nauk; FED'KO, I., kand.biolog.nauk; RAKHIMOV, U.Kh., aspirant; SHUL'GA, N.G., aspirantka; KOBLENTS, L.V., starshiy nauchnyy sotrudnik; PAN'SHIN, I.V., starshiy nauchnyy sotrudnik; KULIKOVA, M.T., aspirantka; SIDOROVA, S.F., aspirantka

Brief information. Zashch. rast. ot vred. i bol. 9 no.1:52-55 '64.  
(MIRA 17:4)

1. Kustanayskaya sel'skokhozyaystvennaya opytnaya stantsiya (for Badulin, Matis).
2. Vsesoyuznyy institut kukuruzy, Dnepropetrovsk (for Susidko, Fed'ko).
3. Samarkandskiy universitet (for Rakhimov).
4. Belorusskiy institut zemledeliya (for Shul'ga).
5. Tsentral'naya torfobolotnaya opytnaya stantsiya, Dmitrov, Moskovskaya obl. (for Koblents).
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7. Kazakhskiy institut zashchity rasteniy, Alma-Ata (for Kulikova).
8. Vsesoyuznyy institut zashchity rasteniy (for Sidorova).

L 23124-66 EEC(k)-2/EWT(d)

ACC NR: AP6001596

SOURCE CODE: UR/0120/65/000/006/0210/0211

AUTHOR: Kazaryan, R. A.; Vardanyan, E. S.; Sidorova, S. P.

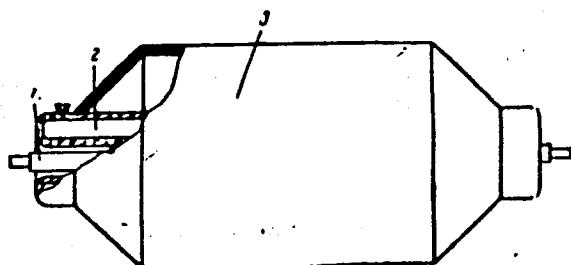
ORG: Yerevan State University (Yerevanskiy gosudarstvennyy universitet)

TITLE: Measuring the energy radiated by tubular flash lamps

SOURCE: Pribory i tekhnika eksperimenta, no. 6, 1965, 210-211

TOPIC TAGS: flash lamp, electric lamp, spectral energy distribution, light energy, measuring instrument

ABSTRACT: The development of a simple device for measuring the total or spectral energy yielded by flash lamps of straight tubular construction is reported. Cylindrical shell 3 (see figure) made from 3-layer copper-wire winding is supported by molybdenum glass jacket 2 which houses test lamp 1. The energy is measured by the variation of resistance of the copper wire. Filling the jacket with a suitable liquid (e.g., 3%  $\text{CuSO}_4$ )



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UDC: 535.231.6

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ACC NR: AP6001596

2  
permits measuring the energy within a particular spectrum band (3200—6500 Å).  
Examples of lamp energy efficiency and spectral characteristics are shown. "The  
authors wish to thank D. Kh. Gigoryan for his help in spectrophotometric work and  
F. A. Avetisyan for building the measuring device." Orig. art. has: 3 figures and  
1 formula.

SUB CODE: 09,8/ SUBM DATE: 10Oct:64 / ORIG REF: 003

Cord 2/2

PB

SHOGAM, S.M.; ORLOV, V.I.; EPSHTEYN, T.B.; SIDOROVA, S.V.; FEN'KOVA, I.Ye.

Fillers for insecticidal dusts and methods of studying them.  
[Trudy] NIUIF no.165:36-45 '59. (MIRA 13:8)  
(Insecticides)



SHOGAM S.M.; SIDOROVA, S.V.

Distribution of the dimensions of particle diameters in powders  
and the dispersity of dusts by means of air dusting. [Trudy]  
NIUIF no.165:63-67 '59. (MIRA 13:8)  
(Insecticides)

SIDOROVA, T. A.

"Investigating Some Problems Involved in the Manufacture of Light-Weight Concrete Wall Bricks From Local Materials in Gor'kaya Oblast." Card Tech Sci, Gor'kiy Construction Engineering Inst, Gor'kiy, 1954. (RZhKhim, No 22, Nov 54)

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SC: Sum. No. 521, 2 Jun 55

SIDOROVA, T.A., kand.tekhn.nauk

Economizing cement in producing slag concrete stones using  
locomotive slags in Gorkiy Province. Trudy GSI no.25:121-140  
'56. (MIRA 11:5)

(Slag cement) (Building blocks)

18.4000

SOV/00-33-2-11-01

AUTHORS: Ageyev, N. V., Fogel', A. A., Sidorova, T. A., Trapeznikov, V. A.

TITLE: Melting Chromium in a Suspended State

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 2, pp 332-337 (USSR)

ABSTRACT: The use of chromium as a base for heat-resistant alloys presents difficulties due to the brittleness of this metal caused by various impurities. One of the authors (A. A. Fogel, Izv. AN SSSR, OTN, 1959, Vol 2, p 24: Experimental Technique and Methods of Investigation at High Temperatures (Eksperimental'naya tekhnika i metody issledovaniy pri vysokikh temperaturakh) publ. by AN SSSR, 1959, p 478) developed a method of melting chromium which dispensed with the use of a crucible and avoided in this manner the contamination of the metal with mineral and gaseous impurities. The metal was kept suspended in an electromagnetic field, and melted by induction heating

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Melting Chromium in a Suspended State

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in purified helium atmosphere. The melting apparatus was fed by a standard electronic generator type LIPZ-60 with a frequency of 200,000 hertz. The initial vacuum in the melting chamber before the introduction of helium was from  $3 \cdot 10^{-3}$  to  $5 \cdot 10^{-6}$  mm Hg, depending on the conditions of the experiment. To avoid volatilization of the metal, the melting was made under 1.1-1.2 atm helium pressure. The gas was carefully purified by passing it through an adsorbing filter filled with activated carbon and silica gel, cooled down to the boiling point of liquid nitrogen. Chromium samples were prepared from electrolytically refined metal, or from metal purified by means of the iodide method, designated in this abstract as "iodide chromium". Little spheres ( $d$  - about 16 mm; weight, 12-15 g) were compressed from the above materials and degassed before melting by slow heating in high vacuum (about  $10^{-7}$  mm Hg). The metal was maintained suspended in the magnetic field until fully molten; when the field was switched

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Melting Chromium in a Suspended State

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off, the metal dropped into a copper casting mold. From 100 cast samples, 25% showed a lower content of nitrogen as compared with the initial content, 73% showed no changes, and 2% showed a higher than initial nitrogen content. The electrolytic chromium used in the experiments contained: O, 0.0084-0.013%; N, 0.008-0.0108%; H, about 0.001%; C, 0.020-0.025%; S, 0.003-0.004%; Si, 0.040%; Fe, 0.030%; Al, 0.01-0.015%; Mn, 0.003%; Ni, 0.0007%; Cu, 0.001-0.004%; Ti, 0.006%; Co, 0.001%. The compressed spheres showed 0.0103-0.0122% oxygen on the surface, and 0.0082-0.0092% near the center; nitrogen content was respectively 0.012% and 0.0073%. The melting took 105 sec, and the O and N content inside the cast samples was, respectively, 0.0068-0.0110%, and 0.0030-0.0069%, i.e., the O and N content did not increase during the melting and casting. Similar results were obtained with the iodide chromium (about 0.005% oxygen, and about 0.006% nitrogen inside the cast samples). Hardness of the cast samples

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Melting Chromium in a Suspended State

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(Rockwell scale B converted to Brinell) was 115-116 kg/mm<sup>2</sup> for the electrolytic, and 108-110 kg/mm<sup>2</sup> for the iodide chromium. Tensile strain of the electrolytic chromium castings was determined in an IM-4P type machine in the range of 45-400° C. The yield point was reached above 250° C, but even at 450° C the tensile strain was only 3%. Compression tests showed that the point of transition from plastic to brittle state (at 150-175° C) was identical for both the electrolytic and the iodide chromium casts. There are 5 figures; and 5 Soviet references.

ASSOCIATION: A. A. Baykov Institute of metallurgy, Academy of Sciences USSR (Institut metallurgii imeni A. A. Baykova AN SSSR)

SUBMITTED: June 6, 1959

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24-2300 1160 1482 1454 1496 4016 30896  
 S/180/61/000/005/006/018  
 E194/E555

AUTHORS: Fogel', A.A., Pavlov, N.A., Korkin, I.V. and Sidorova, T.A. (Leningrad)

TITLE: Inductors for heating and melting metals in the levitated condition

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Metallurgiya i toplivo, no.5, 1961, 51-61

TEXT: The practice of heating levitated metals suspended freely in an electromagnetic field is increasing, but many practical problems remain unsolved. This article considers the influence of the frequency and configuration of the electromagnetic field on the heating of a metallic body suspended in it. Expressions are written for the relationship between the electromagnetic pressure on the levitated metal and the specific power transmitted to it. The formulae show that by altering the frequency and intensity of the magnetic field the electromagnetic pressure on the metal may be changed without altering the power transmitted to it. In the case of a freely-suspended metallic body, the force applied by the field is equal to the weight of the body.

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Inductors for heating and melting

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Thus, by altering the frequency it is possible to regulate the power transmitted to the metal and so its temperature. The effect is not strictly a surface one, as the metal has some 'transparency' to the field. Elementary consideration is therefore given to the case of induction heating of a metal plate in a longitudinal plane parallel magnetic field. Formulae are derived for the power transmitted per unit surface of plate, for the electromagnetic pressure on the plate and for the ratio of pressure to power. These expressions are used to construct the curves shown in Fig.1 in which the power transmitted to the plate (curve 1), the electric field strength (curve 2) and the magnetic field strength (curve 3) are plotted as functions of field frequency with a constant electromagnetic pressure on the plate surface ( $F = \text{const}$ ) and constant plate thickness ( $d = \text{const}$ ). The depth of penetration of the electromagnetic energy  $\Delta = \sqrt{\rho / \pi \mu f}$  For a levitated

body the necessary electromagnetic force is determined by its weight. The power required for heating depends mainly on the temperature required because, as there is no thermal insulation, thermal equilibrium is established very quickly, within two or three minutes. The graph of Fig.1 shows that for a given body

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with constant electromagnetic pressure applied to it the power increases with the frequency, so that to raise the temperature the frequency should be raised. The limiting frequency depends on the maximum permissible electrical field intensity at the body surface or on the associated voltage on the inductor. The maximum permissible electrical field intensity should be less than that which causes electrical breakdown and this depends on the properties of the gaseous medium surrounding the inductor. If, with constant electromagnetic pressure, the frequency is reduced then the magnetic field strength must be increased; that is to say, the inductor current must be increased. The limit in this case depends on the permissible current density in the inductor conductors. Thus for a metal body of given size there is a definite range of frequency within which the body can be suspended in the electromagnetic field. The choice of frequency depends on the temperature required and by altering the frequency within this range it is possible to control the limiting temperature of the metal whilst maintaining it in the levitated condition. When a fixed metal body is heated by induction there is a direct

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relationship between the power applied to the inductor and that transmitted to the body. But in the case of a body of levitated metal an allowance must be made for the configuration of the field set up by the inductor, because the configuration determines the nature of the relationship between the power applied to the inductor and that transmitted to the metal. The power transmitted to the metal body is related to the pressure applied to it by the magnetic field. Both the power and the electromagnetic pressure depend upon the magnetic field intensity at the body surface. If the body is levitated, the vertical component equals the weight of the body and the horizontal is zero. Evidently to support the weight of a freely suspended metal body the field intensity under the body should be greater than that above it. In a more uniform field a higher overall field intensity is necessary to support the body. Thus a greater power is transmitted to the body in the more uniform field. If the power applied to the inductor is altered, the position of the body may alter. If it moves vertically but without any change in the field at its surface, there will be no change in the power transmitted to the body. Whereas

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if in moving vertically it passes from a field of one configuration to that of another, then as the power applied to the inductor is increased, that transmitted to the body may increase or decrease, depending upon the configuration of the field. A brief analysis is then made of the field between the two conductors with current flowing in opposite directions. The force acts perpendicular to the direction of the magnetic field, so it is the horizontal component of the field that governs the vertical thrust that supports the body, whilst the lateral component of the field causes only a compression of the body. Thus, if the ratio of the horizontal to the vertical component is low, the plate is suspended at a lower level and a greater power is transmitted to it. Further consideration shows that, in the case of a single-loop inductor, as the power applied to the inductor is increased and the metallic body rises, the power transmitted to it first decreases and then rises again. It is important that the metallic body suspended in the field should have lateral stability, which is not achieved in the simple cases so far considered. The inductors of practical interest are those in which the metal can hang stably in the field.

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